Practitioner's Docket No. 20501/066RIS

REISSUE FILED UNDER 37 C.F.R. § 1.171

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Michael E. Embree et al.

U.S. Patent No.: 6,148,473 Group No.: Unassigned

Issued: November 21, 2000 Examiner: Unassigned

For: BALANCED FLOW VACUUM CLEANER

Mail Stop Reissue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Submission Accompanying Filing of Reissue Request

Reissue of U.S. Patent No. 6,148,473 to Embree et al. (hereinafter "Embree" or "the Embree patent") is requested. Reissue is requested by Oreck Holdings, LLC, the Assignee and undivided owner of the above-identified patent. The reissue request is accompanied by a reissue oath by the assignee of the entire interest, as specified in 37 C.F.R. § 1.172(a), wherein the reissue application does not seek to enlarge the scope of the claims of the original patent. Applicant offers to surrender the original patent.

This request is accompanied by the $770 large entity reissue filing fee required under 37 C.F.R. 1.16(h).

Copies of the Embree patent and newly submitted prior art are enclosed, as specified in 37 C.F.R. § 1.173(a).

The Embree patent as issued includes claims 1-32. Reissue is requested for claims 1-17, 19-25, 27, and 29. Cancellation of claims 18, 26, 28, and 30-32 is requested herein. In addition, amendment of claims 17 and 22 is affected herein. Support for the amendments to claim 17 is found at cancelled claim 18 and at col. 7, line 65 to col. 8, line

7. Support for the amendments to claim 22 is found at cancelled claims 26 and 28, in FIG. 6, and at col. 9, lines 34-43.

The Embree patent is not currently involved in any interference, reissue, reexamination, or litigation. The Embree patent was previously the subject of litigation in *Oreck Holdings, LLC, v. Matsushita Electric Corporation of America*, U.S.D.C. for the Eastern District of Louisiana, Docket No. 02-1176. The litigation between the parties was settled, and prior art patents uncovered by Matsushita are submitted herein. This disclosure of other pending actions regarding the Embree patent is submitted per C.F.R. § 1.178(b).

The reissue requested is based on the newly found U.S. and foreign patents listed below. The patents were uncovered through the litigation described above and through Continuation application S/N 09/717,799. The Continuation application was filed on November 20, 2000, one day before issuance of the Embree patent on November 21, 2000.

The reissue is requested because the Embree patent is, through error and without any deceptive intent, deemed to be wholly or partly invalid by reason of the patentee claiming more than the patentee had a right to claim in the patent. The reissue being requested will not enlarge the scope of the claims of the Embree patent. The prior art references listed below were uncovered after issuance of the Embree patent. The newly found prior art references disclose some of the features of the Embree patent.

Patents from the litigation:

U.S. 869,542	Bergens
U.S. 1,601,774	Scheffer
U.S. 4,811,450	Steadings
U.S. 2,618,007	Fuller
U.S. Des. 258,211	St. Martin
U.S. 5,123,141	Erickson et al.
German DE 40 35 411 A1	Voigt
G.B. 276,235	Vose
U.S. 2,702,214	Turner
EP 0 947 155 A2	Nishimura
G.B. 838,375	Bridge

Patents from Continuation application S/N 09/717,799 (abandoned):

U.S. Re 20,489	Leathers
U.S. 2,187,164	Leathers
U.S. 2,898,621	Vance
U.S. 2,738,538	Vance
U.S. 3,704,482	Brannon
U.S. 2,223,353	Demaree
U.S. 2,225,621	Burkhardt
U.S. 2,300,266	Smellie
U.S. Re 22,370	Cummings
U.S. 2,260,207	Berg
U.S. 3,375,540	Hyde
U.S. 6,131,238	Weber
U.S. 2,633,596	Turner et al.
U.S. 6,115,880	Wulff et al.
U.S. 4,621,390	Hampton et al.
U.S. 4,364,146	Bowerman
Japan 11-56720	(unknown)
G.B. 1,336,104	Wilkins
German DE 34 02 603 A1	Hanschitz

Amendments to the Claims of the Embree patent

17. (Amended) A vacuum cleaner, comprising:

an intake body having an intake opening for receiving a flow of air and particulates, the intake body further having an intake flow area and at least two exit openings;

a filter element to separate the particulates from the flow of air;

at least two conduits, each having a first aperture coupled to one of the exit openings of the intake body and a second aperture in fluid communication with the filter element, and with each conduit of the at least two conduits having a conduit flow area wherein the sum of the conduit flow areas is less than the intake flow area in order to accelerate the flow through the conduits; and

an airflow propulsion device coupled between the intake opening and the exit openings for moving the flow of air from the intake opening to the filter element.

18. (Cancelled)

22. A vacuum cleaner, comprising:

an intake body having an intake opening configured to be positioned proximate to a surface for receiving a flow of air and particulates, the intake body further having at least two exit openings for simultaneously directing the flow of air and particulates out of the intake body;

a filter element for separating at least some of the particulates from the flow of air and particulates;

at least two conduits in fluid communication with the intake body [and the filter element]; [and]

a manifold in fluid communication with the filter element and in fluid communication with the at least two conduits, with the manifold including a first portion coupled to a first conduit and a second portion coupled to a second conduit and wherein at least two air flows in the at least two conduits are merged in the manifold and provided to the filter element;

an airflow propulsion device for moving the flow of air and particulates from the intake opening to the filter element.

26. (Cancelled)

27. (Amended) The vacuum cleaner of claim 22 wherein a first conduit extends independently of a second conduit from the intake body to the manifold [filter element].

28. (Cancelled)

29. (Amended) The vacuum cleaner of claim 22 wherein [one] a conduit of the at least two conduits is in fluid communication with each of the at least two exit openings of the intake body.

30-32. (Cancelled)

SUBMITTED PRIOR ART

U.S. Patent No. 4,811,450 to **Steadings** discloses a single fan motor 40 that drives first and second fan means 36 and 38 (see FIG. 1). Each fan has its own intake air channel 30 and 32 that communicate with the suction intake ports 26 (see FIG. 1). Each fan likewise has its own exhaust opening 42 (see FIG. 2). The exhaust openings open into a filter bag (see col. 6, lines 50-54).

Steadings does not disclose:

1) an approximately constant flow area from the intake opening of the intake body to the air propulsion device;
2) first and second conduits extending from an air propulsion device to a filter element, wherein a combined flow area of the first and second conduits is less than the intake flow area of the intake body;
3) first and second conduits extending from an air propulsion device to a filter element, wherein the first and second conduits increase the upward velocity of the air stream;
4) a manifold that receives two conduits, combines the two airflows, and provides the combined airflow to a filter element;
5) a manifold having an outlet port that is larger than one or more inlet ports corresponding to the one or more conduits, with the outlet port being larger than the inlet ports to reduce a velocity of the airflow passing through the manifold;
6) a flow path from the intake opening through the propulsion device having a radius of curvature not less than approximately 0.29 inches to provide smooth flow along the flow path;
7) a vent in the intake body for exhausting cooling flow for cooling a component within the intake body; and
8) at least one wheel coupled to the intake body and projecting below at least a portion of the lower surface of the intake body to elevate the portion of the intake body above the floor surface, the wheel being positioned in a

path of the cooling air passing outwardly through the vent to diffuse the cooling air.

EP Patent No. 0 947 155 to **Nishimura** discloses a vacuum cleaner nozzle 22 that evidently includes a nozzle input port and two exhaust ports (*i.e.*, sucking intakes 38) in the head. Nishimura does not disclose twin air conduits in the head. Nishimura does not disclose an air pump with dual exhausts.

Nishimura does not disclose:

1) an airflow propulsion device coupled between the intake opening and exit openings. In contrast, Nishimura discloses a vacuum airflow motor 43 that is positioned after the filter (see FIG. 10 and paragraph 0015);
2) an approximately constant flow area from the intake opening of the intake body to the air propulsion device;
3) first and second conduits extending from an air propulsion device to a filter element, wherein a combined flow area of the first and second conduits is less than the intake flow area of the intake body;
4) first and second conduits extending from an air propulsion device to a filter element, wherein the first and second conduits increase the upward velocity of the air stream;
5) a manifold having an outlet port that is larger than one or more inlet ports corresponding to the one or more conduits, with the outlet port being larger than the inlet ports to reduce a velocity of the airflow passing through the manifold;
6) a flow path from the intake opening through the propulsion device having a radius of curvature not less than approximately 0.29 inches to provide smooth flow along the flow path (see 90 degree bends in the airflow path of FIG. 2, for example);
7) a vent in the intake body for exhausting cooling flow for cooling a component within the intake body. In contrast, Nishimura discloses intake holes 6 and 12 (see FIG. 2) and intake holes 39 (see FIG. 6) for

taking in outside air to the motor for cooling. The cooling air evidently travels into the hoses 23; and

8) at least one wheel coupled to the intake body and projecting below at least a portion of the lower surface of the intake body to elevate the portion of the intake body above the floor surface, the wheel being positioned in a path of the cooling air passing outwardly through the vent to diffuse the cooling air.

U.K. Patent No. 838,375 to **Bridge** discloses a vacuum cleaner 1 that includes some manner of air pump and a single outlet 2. Flexible piping 4 is connected to the outlet 2 and branches upwardly into two air passages that extend to an air chamber 8 or manifold. The air chamber 8 combines the two airflows. The air chamber 8 receives a dust bag 15.

Bridge does not disclose:

1) an intake body with an intake opening and at least two exit openings;
2) at least two conduits, each having a first aperture coupled to one of the two exit openings of the intake body and having a second aperture in fluid communication with a filter element;
3) an airflow propulsion device coupled between the intake opening and two exit openings;
4) an approximately constant flow area from the intake opening of the intake body to the air propulsion device;
5) first and second conduits extending from an air propulsion device to a filter element, wherein a combined flow area of the first and second conduits is less than the intake flow area of the intake body;
6) first and second conduits extending from an air propulsion device to a filter element, wherein the first and second conduits increase the upward velocity of the air stream;
7) a manifold having an outlet port that is larger than one or more inlet ports corresponding to the one or more conduits, with the outlet port being

larger than the inlet ports to reduce a velocity of the airflow passing through the manifold;

8) a flow path from the intake opening through the propulsion device having a radius of curvature not less than approximately 0.29 inches to provide smooth flow along the flow path;

9) a vent in the intake body for exhausting cooling flow for cooling a component within the intake body; and

10) at least one wheel coupled to the intake body and projecting below at least a portion of the lower surface of the intake body to elevate the portion of the intake body above the floor surface, the wheel being positioned in a path of the cooling air passing outwardly through the vent to diffuse the cooling air.

U.S. Patent No. 2,633,596 to **Turner** et al. discloses a vacuum cleaner that includes a nozzle 25 that communicates with inlet cavities 124a and 124b that lead to fans 50a and 50b. Each fan has a corresponding air outlet comprising converging ducts 66a and 66b. The two ducts 66a and 66b converge into a **single** duct 193 which extends upwardly into the handle 21 and to a dust bag 194.

U.S. Patent No. 2,702,214 to **Turner** discloses a vacuum cleaner including an electric motor and fan unit 19 mounted in a chassis 10. Impeller fans 51 and 52 are carried by opposite ends of a motor shaft 48. Turner includes trunnions 58 that allow the handle 70 to pivot and also to detach. The trunnion arms 72 and 73 engage the trunnions 58 and further include rectangular extensions 78 which are secured to the handle 70. The fan unit 19 has two inputs 57. It appears that the fan unit 19 has a single outlet, and Turner does not discuss an outlet configuration. This Turner patent discloses the same inlet and fan configuration as the '596 Turner patent.

The two Turner patents do not disclose

1) an intake body with an intake opening and at least two exit openings;

2) at least two conduits, each having a first aperture coupled to one of the two exit openings of the intake body and having a second aperture in fluid communication with a filter element;

3) an airflow propulsion device coupled between the intake opening and two exit openings;

4) an approximately constant flow area from the intake opening of the intake body to the air propulsion device;

5) first and second conduits extending from an air propulsion device to a filter element, wherein a combined flow area of the first and second conduits is less than the intake flow area of the intake body;

6) first and second conduits extending from an air propulsion device to a filter element, wherein the first and second conduits increase the upward velocity of the air stream;

7) a manifold that receives two conduits, combines the two airflows, and provides the combined airflow to a filter element;

8) a manifold having an outlet port that is larger than one or more inlet ports corresponding to the one or more conduits, with the outlet port being larger than the inlet ports to reduce a velocity of the airflow passing through the manifold;

9) a flow path from the intake opening through the propulsion device having a radius of curvature not less than approximately 0.29 inches to provide smooth flow along the flow path. Instead, Turner shows a 90 degree airflow turn in the two fan chambers;

10) a vent in the intake body for exhausting cooling flow for cooling a component within the intake body; and

11) at least one wheel coupled to the intake body and projecting below at least a portion of the lower surface of the intake body to elevate the portion of the intake body above the floor surface, the wheel being positioned in a path of the cooling air passing outwardly through the vent to diffuse the cooling air.

U.S. Patent No. 3,375,540 to **Hyde** discloses an attachment for a floor cleaning machine that includes a rotary scrubbing element 16. Cleaning fluid can be supplied to the rotary scrubbing element 16 by a conduit 25 and reservoir 26. A fan motor 29

provides a vacuum that draws air through flexible conduits 50 and nozzles 51 (see FIG. 3). The two conduits 50 merge into a single stand pipe 53 that terminates in the upper end of reservoir 26. This vacuum therefore picks up the cleaning fluid thrown outwardly by the rotary scrubbing element 16 and returns the cleaning fluid to the reservoir 26.

Hyde does not even disclose:

1) an intake body with an intake opening and at least two exit openings;
2) at least two conduits, each having a first aperture coupled to one of the exit openings of the intake body and a second aperture in fluid communication with a filter element; and
3) an airflow propulsion device coupled between the intake opening and the two exit openings.

U.S. Patent No. 2,618,007 to **Fuller** discloses a vacuum cleaner including a nozzle 20 at the front of the housing 10. The main duct 40 extends from the nozzle 20 in two branches 42 that join together to form a transverse duct 44 (see FIG. 3). The airflow travels through the transverse duct 44, through a filter bag 34, and then through the fan 32. This prior art does not disclose an airflow propulsion device, does not disclose a filter element, and does not disclose an airflow propulsion device positioned between an intake opening and at least one conduit coupled between an intake body and a filter element.

Fuller does not even disclose:

1) an intake body with an intake opening and at least two exit openings;
2) at least two conduits, each having a first aperture coupled to one of the exit openings of the intake body and a second aperture in fluid communication with a filter element; and
3) an airflow propulsion device coupled between the intake opening and the two exit openings.

OTHER VACUUM CLEANERS

The prior art references below all disclose vacuum cleaners. These prior art references are not particularly pertinent. These prior art references as a group do not disclose, at least:

1) at least two conduits, each having a first aperture coupled to one of the exit openings of the intake body and a second aperture in fluid communication with a filter element;
2) an airflow propulsion device coupled between the intake opening and the two exit openings; and
3) a manifold that receives two conduits, combines the two airflows, and provides the combined airflow to a filter element.

U.S. Patent No. 276,235 to **Vose** discloses a motor 2 and fan 4 concentrically mounted inside a housing (see FIGS. 1 and 2). Vose only discloses one passage having one inlet and one outlet. The concentrically mounted motor 2 is supported in the housing by baffle plates 12 that also prevent rotation of air around the motor 2. This prior art does not disclose an airflow propulsion device, does not disclose a filter element, and does not disclose an airflow propulsion device positioned between an intake opening and at least one conduit coupled between an intake body and a filter element.

U.S. Patent No. Re 20,489 to **Leathers** discloses a vacuum cleaner wherein the filter 2 is contained in the handle 1. A nozzle 6 is connected to the motor and blower housing 9 by an air inlet 10. There is only one conduit between the nozzle and the motor/fan unit and only one conduit from the motor/fan unit to the filter.

U.S. Patent No. 2,187,164 to **Leathers** discloses a vacuum cleaner wherein air drawn in through a nozzle passes through an air passage 16. Only one air passage is shown. The motor 13 is concentrically mounted in the housing 4, and air moved by the impeller 25 is collected and passes through the air passage 16 to the filter 7. Leathers discloses that clean air leaking in around the dirt-receptacle 6 is drawn into the motor at

20 by a motor ventilating fan 21, through a baffle plate 22, and exhausted at the port 23 (see col. 1, lines 39-43 and FIG. 2).

U.S. Patent No. 2,898,621 to **Vance** discloses a vacuum cleaner including a nozzle 14 having a downwardly facing suction mouth 20 (i.e., nozzle, see FIG. 1). A suction tube 22 extends from the mouth 20 to a motor-fan-filter unit 30. The motor fan assembly 32 is located in the vacuum cleaner base and pulls the vacuum airflow in through the mouth 20, up the suction tube 22 and flexible hose 51, through a filter bag 34, through the motor fan assembly 32 and is exhausted from the vacuum cleaner through outlet ports 65 (see FIG. 2).

U.S. Patent No. 2,738,538 to **Vance** discloses a vacuum cleaner that includes a suction nozzle 2. A motor in the housing 6 draws air form the nozzle 2. An air duct 10 provides communication between the nozzle 2 and the fan chamber. The motor passes the airflow to an exhaust duct 9 communicating with a filter member 23. Vance discloses that the air stream will then divide, one portion will flow through port 71, the interior of deflector 75 into the housing 72 where it will flow over the headlight 73 to cool it and be discharged through opening 74 (see col. 4, lines 20-23 and FIG. 5).

U.S. Patent No. 3,704,482 to **Brannon** discloses a positive air pressure cleaning devic3e including a filter bag 14. An electric motor 16 draws air from an input end 20 of the motor and provides a positive pressure airflow to an output end 22. The resulting positive pressure airflow travels through an exit slot 30, picks up dirt, and travels back up a transport area 21 and a passageway guide area 49 to the filter bag 14.

U.S. Patent No. 2,223,353 to **Demaree** discloses a suction cleaner including a nozzle 11. A motor 15 and fan 17 draw air in through the nozzle 11 and discharge the air through a discharge outlet 20 that communicates 2ith a filter bag 49.

U.S. Patent No. 2,225,621 to **Burkhardt** discloses a suction cleaner that includes a nozzle 1 in communication with two passageways 4 and 5. Passageway 4 opens into

the eye 6 of the fan chamber 7 (see FIG. 3). Passageway 5 encloses the belt and belt-drive pulley 9, and **evidently** does not conduct an airflow. The airflow output of the fan 7a travels through an exhaust outlet 19 to the dust bag 34.

U.S. Patent No. 2,300,266 to **Smellie** discloses a vacuum cleaner including a suction mouth and a motor 4 and tan 6 in communication iw6th the suction mouth. A hollow casing section 9 connects the nozzle chamber with the fan chamber 5 through an annular inlet opening. A passage 9 on the opposite side of the casing provides a housing for a belt 10. Airflow from the fan 6 passes through an outlet passage to a rotary filter comprising a motor 16 and a filter member 17.

U.S. Patent No. Re 22,370 to **Cummings** discloses a suction cleaner including a nozzle 1 and a motor 4. Air is drawn from the nozzle 1 by a fan 6 of the motor 4 (see FIG. 3). An exhaust outlet 12 communicates the airflow from the fan 6 to a dust bag 17.

U.S. Patent No. 2,260,207 to **Berg** discloses a suction cleaner including a nozzle 2 in communication with a fan chamber 4. The exhaust outlet from the fan chamber 4 opens in an upwardly direction and into the lower end of a dirt bag 7.

U.S. Patent No. 6,131,238 to **Weber** discloses a vacuum cleaner that includes a foot 4 and nozzle 46. A nozzle body 42 includes a nozzle outlet 48 (see FIGS. 2 and 3). No further details of the air path are shown or discussed in Weber.

U.S. Patent No. 6,115,880 to **Wulff** et al. discloses a vacuum cleaner that includes a suction nozzle 38 (see FIG. 10) that is connected to a duct 40 through conduit 106 to filter bag housing 14 (see FIG. 3). A vacuum outlet 92 at the bottom of the bag receiving chamber 76 communicates with a vacuum motor and pump unit 94. Wulff therefore places the air pump at the exhaust end of the airflow.

U.S. Patent No. 4,621,390 to **Hampton** et al. discloses a vacuum cleaner that includes two nozzle apertures 177 (see FIG. 10). Hampton further discloses a motor 110

in the base. A single outlet tube extends from the motor 110 to a filter bag by means of a rectangular hollow handle section. The motor 110 (see FIG. 17) and impeller 160 (see FIG. 15) provide an airflow to a rear port 231 (see FIG. 20).

U.S. Patent No. 4,364,146 to **Bowerman** discloses a vacuum cleaner that includes a nozzle 16, a conduit 20 leading to a filter bag 18, and a conduit 26 leading to a motor-fan unit 28 (see FIG. 1B).

U.K. Patent No. 1,336,104 to **Wilkins** discloses a suction cleaner that includes a slot in a grit tray 8 and an impeller chamber 9. Airflow passing through the slot also passes through an aperture 11 leading to the impeller chamber 9.

SUCTION TOOLS

The prior art references below all disclose tools that can be attached to an air or water vacuum hose. These prior art references are not particularly pertinent. These prior art references as a group do not disclose, at least:

1) at least two conduits, each having a first aperture coupled to one of the exit openings of the intake body and a second aperture in fluid communication with a filter element;
2) an airflow propulsion device coupled between the intake opening and the two exit openings; and
3) a manifold that receives two conduits, combines the two airflows, and provides the combined airflow to a filter element.

U.S. Patent No. 869,542 to **Bergens** discloses a pneumatic cleaning device that includes a hollow head 1. The head 1 includes a chamber 2 that includes two conduits extending upwards and merging to provide a single outlet. A suction source, such as a suction hose, is connected to this single outlet. This prior art does not disclose an airflow propulsion device, does not disclose a filter element, and does not disclose an airflow propulsion device positioned between an intake opening and at least one conduit coupled between an intake body and a filter element.

U.S. Patent No. 1,601,774 to **Scheffer** discloses a vacuum tool comprising a roller and a conduit yoke. Air is taken in at the roller and passes into the yoke, with the yoke comprising two conduits that merge above the roller/intake portion to form a single outlet. The single outlet is connected to a suction handle 5. This prior art does not disclose an airflow propulsion device, does not disclose a filter element, and does not disclose an airflow propulsion device positioned between an intake opening and at least one conduit coupled between an intake body and a filter element.

German Patent No. DE 40 35 411 to **Voigt** discloses what appears to be a vacuum cleaner tool (see FIG. 1). Air is drawn into the tool through a yoke comprising two air conduits 4. The conduits 4 of the yoke merge into a single tube 5. Vacuum airflow is generated upstream through the tube 5. This prior art does not disclose an airflow propulsion device, does not disclose a filter element, and does not disclose an airflow propulsion device positioned between an intake opening and at least one conduit coupled between an intake body and a filter element. This prior art does not disclose an airflow propulsion device, does not disclose a filter element, and does not disclose an airflow propulsion device positioned between an intake opening and at least one conduit coupled between an intake body and a filter element.

U.S. Design Patent No. Des. 258,211 to **St. Martin** shows a head for a contour forming underwater vacuum sweep. The head includes three hoses on a rolling carriage. The three hoses join at a splitter fitting connected to a pipe of some manner. A water pump is connected to the pipe at an upstream location. This prior art does not disclose an airflow propulsion device, does not disclose a filter element, and does not disclose an airflow propulsion device positioned between an intake opening and at least one conduit coupled between an intake body and a filter element.

U.S. Patent No. 5,123,141 to **Erickson** et al. discloses a cleaning tool for a vacuum cleaner. The tool includes a housing 12 and a manifold 20 within the housing 12 (see FIG. 3). The manifold 20 includes two openings 22 and two branches 24, with the

two branches joining to feed into a single tube or outlet. The vacuum air pump is upstream of the tube and is not shown. This prior art does not disclose an airflow propulsion device, does not disclose a filter element, and does not disclose an airflow propulsion device positioned between an intake opening and at least one conduit coupled between an intake body and a filter element.

MISCELLANEOUS

The two prior art references below were cited by an Examiner in a continuation application (now abandoned), Serial No. 09/717,799. These two prior art references are not particularly pertinent but are included herein merely because they were cited in Office Actions in the continuation application. **Japan** Patent No. 11-56720 discloses an air conduit having a curve in the conduit of a selected curvature. German Patent DE 34 02 603 A1 to **Hanschitz** is in German, and appears to show some manner of air handling device. However, Applicant cannot tell with any degree of certainty what the device comprises.

CONCLUSION:

Independent claim 1 requires a flow path that has an approximately constant flow area from an intake opening of an intake body to an air propulsion device. None of the included prior art references teach an approximately constant flow area from an intake opening of an intake body to an air propulsion device. None of the included prior art references are concerned with flow area. Claim 1 and the claims depending therefrom are patentable over the submitted prior art. Accordingly, claims 1-10 are unchanged.

Independent claim 11 requires a flow path having an approximately constant flow area from an intake opening of an intake body to an air propulsion device. Claim 11 further requires a flow path from the intake opening through the air propulsion device having a radius of curvature not less than approximately 0.29 inches to provide smooth flow along the flow path. None of the included prior art references teaches an approximately constant flow area from an intake opening of an intake body to an air propulsion device and a flow path from the intake opening through the air propulsion device having a radius of curvature not less than approximately 0.29 inches. None of the included prior art references are concerned with flow area or radius of curvature of a flow path in a vacuum cleaner. Claim 11 and the claims depending therefrom are patentable over the submitted prior art. Accordingly, claims 11-16 are unchanged.

Independent claim 17 requires an intake body with an intake opening and at least two exit openings. Claim 17 further requires at least two conduits, each having a first aperture coupled to one of the exit openings of the intake body and a second aperture in fluid communication with a filter element. Claim 17 further requires an airflow propulsion device coupled between the intake opening of the intake body and the two exit openings of the at least two conduits. Claim 17, as amended, further requires that each conduit of the at least two conduits has a conduit flow area wherein the sum of the conduit flow areas is less than the intake flow area in order to accelerate the flow through the conduits.

In some respects, the most pertinent prior art references may be Steadings and Nishimura. Steadings discloses an intake body having two intake openings, two exit

openings, and two conduits extending between an air propulsion device and a filter element. Steadings further discloses the air propulsion device coupled between the intake opening of the intake body and the two exit openings of the two conduits. Likewise, Nishimura discloses an intake body having one intake opening, two exit openings, and two conduits. However, Nishimura discloses an air propulsion device positioned after the filter element, and not between the intake opening and the two exit openings of the two conduits.

Claim 17, as amended, and the claims depending therefrom are patentable over the submitted prior art. Neither Steadings nor Nishimura disclose at least two conduits having a conduit flow area wherein the sum of the conduit flow areas is less than the intake flow area in order to accelerate the flow through the conduits. Accordingly, claims 17 and 19-21 are patentable over the submitted prior art.

Independent claim 22 requires an intake body with an intake opening and at least two exit openings for simultaneously directing the flow of air and particulates out of the intake body. Claim 22 further requires at least two conduits in fluid communication with the intake body and a filter element. Claim 22, as amended, further requires a manifold in fluid communication with the filter element and in fluid communication with the at least two conduits, with the manifold including a first portion coupled to a first conduit and a second portion coupled to a second conduit and wherein at least two air flows in the at least two conduits are merged in the manifold and provided to the filter element.

In some respects, the most pertinent prior art references may be Nishimura and Steadings. Nishimura includes an intake body having at least one intake opening and two exit openings 38. Nishimura also has at least two conduits 23 in fluid communication with the intake body and a filter element. Steadings includes an intake body having two intake apertures and at least two exit openings to the fan unit and further includes two conduits in fluid communication with the intake body and a filter element.

Claim 22, as amended, and the claims depending therefrom are patentable over the submitted prior art. Neither Nishimura nor Steadings disclose a manifold in fluid communication with the filter element and in fluid communication with the at least two

conduits. Accordingly, claims 22-25, 27, and 29 are patentable over the submitted prior art.

Applicants respectfully request reissue of Embree and allowance of the original and amended claims (*i.e.*, claims 1-17, 19-25, 27, and 29) of the Embree patent.

Please feel free to call me to discuss the patentability of the pending reissue claims.

Date: 1/23/04

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SIGNATURE OF PRACTITIONER

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Enclosures